

***Remarks***

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 19-21 are pending in the application, with claims 19 and 20 being the independent claims. Claims 19 and 20 are sought to be amended solely to clarify their scope. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

***Rejections under 35 U.S.C. § 102***

In the Office Action, claims 19 and 20 were rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by Shibasaki, U.S. Patent No. 6,317,585 (Shibasaki). Applicant respectfully traverses this rejection.

Shibasaki does not teach or suggest each and every element of amended independent claims 19 and 20. The Office Action alleges that "Shibasaki discloses a wireless link signal having a format including periodic bursts of constant length each occupied by either one long burst or an integral number of short bursts of equal length." (Office Action, p. 3). The Office Action appears to equal the "one long burst" recited in the claims to the seven frames of data that are transmitted on the return link during the period T7 to T13. (Office Action, p. 3). The Office Action further appears to equate the "integral number of short bursts of equal length" recited in the claims to the three frames of data that are transmitted on the return link during

the period from T3 to T5. (Office Action, p. 3). Applicants respectfully disagree with this understanding.

A short burst in Shibasaki (such as the short burst shown in FIG. 10 in the period T3 to T5) is composed of three frames of data, each sent by a different mobile station. (Shibasaki, FIG. 10). While in short burst mode, each mobile station transmits only one frame of data. The number of frames in the short burst is therefore dependent upon the number of mobile stations that wish to transmit. The short burst may have a duration of only one frame (as shown in FIG. 7 and at time T14 in FIG. 10) or three frames (as shown in the period T3 to T5 in FIG. 10) or any other duration. (Shibasaki, FIGs. 7, 10). Thus, Shibasaki's short bursts are of variable length.

Similarly, Shibasaki's "long bursts" are also not of constant length. The length of Shibasaki's long burst transmission is based upon the number of mobile stations that wish to transmit and the number of frames of data that each mobile station wishes to transmit. (Shibasaki, col. 10, lines 29-35; FIG. 10). In the FIG. 10 example, the long burst is seven frames long: Mobile Station 1 (MS1) transmits three frames of data and Mobile Station 2 (MS2) transmits four frames of data. (Shibasaki, FIG. 10). Therefore, the length of the long burst will vary if more (or fewer) mobile stations wish to transmit data and/or if each mobile station wishes to transmit more (or fewer) frames of data. Accordingly, Shibasaki's long bursts are also of variable length.

Thus, Shibasaki describes transmitting bursts of data that comprise a variable number of frames, where each frame has a constant duration. The fact that each frame has a constant duration, regardless of whether it is part of a long burst or a short

burst, can clearly be seen by the arrow indicating the length of a frame in FIG. 3B.  
(Shibasaki, FIG. 3B).

Accordingly, Shibasaki does not teach or suggest "periodic blocks of constant length each occupied by either one long burst or a plurality of short bursts of equal length," as recited in independent claims 19 and 20.

The claimed subject matter of "periodic blocks of constant length that are occupied by either one long burst or a plurality of short bursts of equal length" is particularly advantageous because it avoids wastage of bandwidth by guard bands while having a simple timing alignment in which time slots have a fixed length (Specification, p. 1, lines 11-14, 29-30). The use of periodic blocks of constant length gives rise to the simple timing arrangement. The ability to transmit a long burst of data within such "periodic blocks" avoids the wastage of bandwidth that would result from the need to leave guard bands between a number of shorter bursts of data.

For example, four of the short bursts of data shown in FIG. 6a of Applicants' specification have a total duration of 20 ms (5 ms per frame x 4 frames) and comprise 448 symbols of data (112 symbols per frame x 4 frames = 448 symbols). (Specification, FIG. 6a; p. 9, lines 5-11). In contrast, the long burst shown in FIG. 6b of Applicants' specification also has a duration of 20 ms but comprises 596 symbols of data. (Specification, FIG. 6b). Therefore, approximately 33% more data can be transmitted in the long burst during the same time interval as in the four shorts bursts in this example. Hence, by transmitting "periodic blocks of constant length each occupied by either one long burst or a plurality of short bursts of equal length," as the

circumstances require, one can achieve a considerable improvement in bandwidth efficiency without complicating the timing of transmissions.

For at least these reasons, amended independent claims 19 and 20 are patentable over Shibasaki. Reconsideration and withdrawal of the rejection are therefore respectfully requested.

***Rejections under 35 U.S.C. § 103***

In the Office Action, claims 21 and 22 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Shibasaki in view of Grayson, U.S. Patent Publication 2002/0028668 (Grayson). Applicants respectfully traverse this rejection.

Claim 22 was canceled previously in the Reply to the February 2, 2007 Office Action.

Claim 21 depends from claim 19. Grayson does not overcome all of the deficiencies of Shibasaki relative to claim 19, described above. For at least these reasons and further in view of its own features, claim 21 is patentable over the combination of Shibasaki and Grayson. Reconsideration or withdrawal of the rejection is therefore respectfully requested.

***Conclusion***

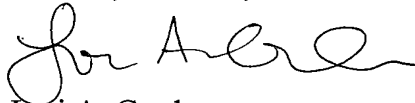
All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete

reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Lori A. Gordon", written in a cursive style.

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